ACADEMIC PLANNER 2025-2026 (S.D PUBLIC SCHOOL.PITAM PURA.DELHI)
CLASS-X (SCIENCE)

1.MONTHS & DAYS	2.CONTENTS	3.LEARNING OUTCOMES	4.ACTIVITY / EXPERIMENT	5.ASSIGNMENT/H.W	6.MODE OF ASSESSMENT	7.INTERDISCIPLINARY ASPECT/SUSTAINED IMPACT-SDG	8.21st CENTURY SKILLS	9.TEACHING PEDAGOGY
April								
1- 15 (10 days)								
Phy.	Chap-10 Light- Reflection & Refraction:Reflection of light, spherical mirrors	1)study the characteristics of image formation in plane mirrors. 2)study the laws of reflection 3) differentiate between real and virtual images. 4)compare the types of spherical mirrors. 5) draw ray diagrams for image formation by Spherical Mirrors (concave and convex mirror) 6)solve numericals using mirror formula	To Determine the focal length of Concave mirror and Convex lens by obtaining the image of distant object.	Assignment containing NCERT and extra questions	Group assignments and projects/ Information gathering and deducing	Mathematics Biology:The biology of vision is directly linked to the behavior of light Environmental Science: Geography:Light and Climate: Art (Visual Arts):Color Theory Computer Science:Optics in Technology,Laser Technology History (Technology and Innovation) Connected to SDG 7, SDG 9, and SDG 13 by addressing the scientific understanding of	1. Critical Thinking and Problem Solving 2. Collaboration and Teamwork 3. Creativity and Innovation 4. Communication Skills 5. Digital Literacy 6. Scientific Literacy 7. Global and Cultural Awareness 8. Adaptability and Flexibility 9. Ethical and Responsible Citizenship	Inquiry-Based Learning Hands-On Learning/Experiments Concept Mapping Collaborative Learning Problem-Based Learning (PBL) Visualization and Interactive Tools Storytelling Gamification Real-World Application
Chem.	Chap-1 : Chemical Reactions & Equations	Students would be able to 1. Express a chemical reaction through a balanced chemical equation 2. Develop the ability to analyze and differentiate between various types of chemical reactions		Intext Questions	1. Written test 2. Lab activity 3. Group Discussio	Maths- Solving an equation to find the variables	critical thinking and creat	Cooperative and collaborative learning
	Balancing a chemical equation		To perform &observe the following reactions					
	Types of chemical reactions - Combination reaction		(a) combination reaction	ONLINE EDUCOSOFT ASSESSMETS				
	Decomposition reaction,Displacement reaction .		(b) decomposition reaction					
			(c) displacement reaction					
			(d) double displacement reaction					
Bio.	Chapter 5 : Life processes Nutrition,Autotrophic Nutrition in plants and Heterotrophic Nutrition	1. Analyses similarities and differences in the life processes involved in nutrition (photosynthesis in plants	1.To prepare a temporary mount of a leaf peel to show stomata 2. To show	Assignment containing NCERT and extra questions	Class test group assignments and projects/ Information gathering	Maths Data analysis	Critical thinking, creativity and collaboration	Experiential Learning:allowing students to connect scientific concepts to their daily lives and
April								
16 - 30 (12 days)								

Phy.	Chap-10 Light- Mirror formula , image formation,Refraction		To Determine the focal length of Concave mirror and Convex lens by obtaining the image of distant object.	Intext Questions	Interactive Quizzes/Science Concept Cards			
Chem.	Chap -1 : Chemical React	Students will be able to explain redox reactions,identify oxidising and reducing agents 5. cite examples of oxidation in day to day life. Explain corrosion and rancidity and suggest ways to prevent them 6. Carry out practical in lab and develop critical thinking and		Intext Questions	Science Concept cards	SDG 9, SDG 12 and SDG 11 with respect to rancidity and corrosion	Problem solving, communication and collaboration	Experimentation and observation, Lecture method
	Types of chemical reactions- double displacement , precipitation							
	Oxidation & Reduction (redox) , Application of oxidation in daily life:			TBQ and assignment				
Bio.	Chap. 5 contd. : Life Processes contd.Types of respiration , respiratory system,transportation -	1.Explains processes and phenomena 2. Draws labelled diagrams, flow charts, concept maps, and graphs 3. understands	1.To prepare a temporary mount of a leaf peel to show stomata 2. To show	Assignment containing NCERT and extra questions	Interactive Quizzes/Science Concept map	SDG 2 & 3	Problem solving, communication Information literacy, flexibility and adaptability	Experiential Learning: Direct instruction Peer to peer learning Group work
MAY								
1 - 15 (11 days)								
Phy.	Chap-10 Light- image formation by lenses		To trace the path of ray of light passing through a rectangular glass slab.	Assignment containing NCERT and extra questions				
Chem.	Chap -2 : Acid, Bases and	Students would be able to 1. compare chemical properties of acids and bases, write equations and give illustration 2. analyze and compare pH of						
	bases, examples & uses, physical properties , indicators, strength of acids & bases		of acids & bases by reaction with: (1) Litmus solution (2) Zn metal (3) Solid	Intext Questions	Brain Storming		Critical thinking	Discussion of topic through Collaborative Learning:
Bio.	Chapter 7 : Control and Coordination Nervous system, reflex action, human brain, action caused by brain	1.Understands importance of nervous system 2.Reflex action and reflex arc 3.Human brain strucrure and functions 4.Draws	Activity discussion and demontration on phototropism and geotropism	Assignment containing NCERT and extra questions	Interactive Quizzes/Science Concept map	SDG 2 & 3	Problem solving, communication Information literacy, flexibility and adaptability	Discusson method, peer to peer learning , Recall through mind map & student presentation
				ONLINE EDUCOSOFT ASSESSMETS				
MAY								
16-25 (8 Days)								
Phy.	Chap-10 Light- lens formula , power of lens			TBQs and assigment				

Chem.	Chemical properties of acids and bases, a) Reaction of acid & bases with metals, metal carbonates, metal bi-carbonates b) reaction of metallic oxide with acids & reaction of non metallic oxide with bases c) Reaction of acids and bases with each other	identify strong and weak acids and bases apply concepts of neutralization in everyday life		Intext Questions	Think-Pair-Share	SDG 13	Problem solving, Communication	Experiential learning, demonstration method
Bio.	Chapter 6 : Control and Coordination Contd. Coordination in plants, immediate response to stimulus	1. Draws well labelled diagrams 2. Understand stimulus and how to respond 3. Understands coordination in	Model of human brain Activity demontration	TBQs and assigment	Oral assessments in the form of viva Written assessments in the form of SAQs	Human brain & AI Psychological disorders and effects on human population SDG 2 & 3	Problem solving, communication Information literacy, flexibility and adaptability	Experiential Learning:allowing students to connect scientific concepts to their daily lives and
				ONLINE EDUCOSOFT ASSESSMETS				
	SUMMER VACATIONS							
July								
1- 15 (12 days)								
Phy.	Chap-11 Human eye and colourful world: Functioning of lens in human eye, Defects of vision and their corrections	1)Discover that white light is a mixture of colours and appreciate that the dispersion is caused by the difference in angles of deviation caused by a prism for different colours 2)Correlate dispersion, refraction to certain observations in daily life and in nature like rainbow 3)Correlate atmospheric refraction and scattering to certain observations in daily	To draw the images of an object formed by a convex lens when placed at various positions	Assignment containing NCERT and extra questions	Think-Pair-Share/Student Presentations	Physics Biology Engineering and Technology Environmental Science Chemistry Health Sciences Astronomy SDG 4 SDG 9 SDG 12 SDG 13	Critical Thinking and Problem Solving Collaboration and Communication Creativity and Innovation Digital Literacy Global Awareness and Environmental Literacy Scientific Literacy Decision Making Adaptability and Flexibility	Inquiry-Based Learning: Encourage students to explore phe Hands-On Learning/Experiments Concept Mapping Collaborative Learning Flipped Classroom Problem-Based Learning (PBL
Chem.	Chapter 2 : pH and its importance,chemicals from common salts-sodium hydroxide, bleaching powder, baking soda,washing soda, POP (Plaster of Paris)	describe preparation of different salts and suggest their uses in day to day life	To find the pH of the following solutions using a pH paper. (1) Dil. HCl (2) Dil.NaOH solution (3) Dil. Ethanoic acid (3) Dil. Ethanoic acid (4) Lemon juice (5) Water	TBQ and assignment	Science concept cards	Related to biology as pH plays an important role in working of our body Retrieving data. Wait a few seconds and try to cut or copy again.	Creativity, critical thinking	Demonstration and group discussion
				EDUCOSOFT ASSESSMETS				

Bio.	Chap-6: Control and Coordination Contd. movements due to growth, tropic movements	1. Draws labelled diagrams, flow charts, concept maps neuron & human brain its structure and functions 2. Understands different types of tropic movements	To show experimentally that carbondioxide is given out during respiration	TBQs and assigment	Written assessments as SAQs, online quiz, oral assessments	Ecosystem conservation SDG 2 & 3	Problem solving, communication Information literacy, flexibility and adaptability	Experiential Learning:allowing students to connect scientific concepts to their daily lives and Direct instruction blended approach
July								
16 - 31 (14 days)								
Phy.	Chap-11 Human eye and colourful world : Refraction in prism ,Dispersion of light, scattering of light Applications in daily		To trace the path of ray of light passing through a glass prism.	Assignment containing NCERT and extra questions				
Chem.	Chap-3 Metals and Non-Metals- Physical Properties of metals and non-metals Chemical properties: Reaction of metals with air, water and acids	Students will able to describe 1. Electronic configuration of Metals and Nonmetals 2. Differentiate Physical and chemical properties of metals and non-metal	To observe the action of Zn, Fe, Cu, Al on following salts- ZnSO4, FeSO4, CuSO4, Al2(SO4)3 And arrange the metals in order of decreasing reactivity	Intext Questions	Quiz, MCQ	Geography- Extraction of metals, origin and region	SDG 13	Experimentation and observation, Hands on learning
Bio.	Chapter 6 : Control and Coordination Contd. Hormones in animals Chapter 8 How do organisms reproduce basic introduction	1. Is able to make practical observation of responses shown by plants 2. Understands the significance of plant and animal hormones. 3. Draws labelled diagrams, flow charts, concept maps, graphs. 4. Records observations of slides under	To study a) Binary fission in amoeba, b) Budding in yeast and Hydra with the help of prepared slides	TBQs and assigment	Class test Self-Assessment and Reflection Peer Review	Hormonal disorders & Diseases, Geographical reasons behind goitre SDG 2 & 3	CollaborationProblem solving, communication, critical thinking , Information literacy, flexibility and adaptability	Discussion of topic through Collaborative Learning:
				ONLINE EDUCOSOFT ASSESSMETS				
	U.T 1 (21 July- 26 July)		SYLLABUS- CHAPTER-1 CHEMICAL REACTIONS AND EQUATIONS CHAPTER-6 LIFE PROCESSES CHAPTER-10					
Aug								
1- 15 (11 days)								
Phy.	Chap-12 : Electricity							

	Electric current, potential diff	1)define electric current, potential difference, resistance, resistivity and power. 2)deduce ohm's law and verify it experimentally. 3)solve numericals on combination of resistors in series and parallel. 4)derive and state the joules law of heating and solve numericals based on it. 5)find an expression for electric power and derive commercial unit of electrical energy.		Assignment containing NCERT and extra questions	Presentations on science concepts/ experiments	Physics: Core concepts of current, voltage, and resistance in circuits. Chemistry: Electrochemistry, materials science (conductors and insulators). Environmental Science: Energy conservation, renewable energy, and environmental impact. Mathematics: Solving equations, graphing, and interpreting data on current and voltage. Technology and Engineering: Circuit design, microelectronics, and renewable energy technologies. "Economics: Cost of energy, energy markets, and electricity pricing. Geography: Energy resources, energy distribution, and rural electrification. Health Science: Electrical safety, first aid, and biomedical devices.	Critical Thinking and Problem-Solving Collaboration and Teamwork Creativity and Innovation Communication Skills Digital Literacy Global Awareness and Sustainability.	Inquiry-Based Learning: Encourage students to explore phe Hands-On Learning/Experiments Concept Mapping Collaborative Learning Flipped Classroom Problem-Based Learning (PBL Visualization and Interactive Tools Storytelling and Historical Context: Gamification Real-World Application
Chem.	Reaction with metal salt solution , Reactivity series	Students will be able to describe formation of ionic compouns, give explanation for the properties shown by ionic compounds		Intext Questions	Observations and responses from activities	SDG 9 AND 11	Critical thinking, Problem sol	Demonstration and group discu
Bio.	Chapter 8 How Do Organisms Reproduce Contd. - Variation and its importance, asexual reproduction - fission, fragmentation,regeneration, budding vegetative	1. Understands process asexual reproduction and sexual reproduction in higher plants & humans 2. is able to observe the process of asexual reproduction in permanent slides. 3. Is able to understand	To study a) Binary fission in amoeba, b) Budding in yeast and Hydra with the help of prepared slides	ONLINE EDUCOSOFT ASSESSMETS	Class test Self-Assessment and Reflection Peer Review	STDs causes and prevention SDG 2 & 3	Problem solving, communication Information literacy, flexibility and adaptability	Experiential Learning: allowing students to connect scientific concepts to their daily lives and Direct instruction blended approach
Aug.								
16-31 (12 days)								
Phy	Chap-12 : Electricity - circuit diagram, Ohm's law		To verify Ohm's Law.	Assignment containing NCERT and extra questions				

Chem.	Chap-3 Metals and Non-Metals- Reaction between metals & non metals,Ionic bond and Ionic compounds, Properties of Ionic compounds, corrosion of metals & Its prevention, Metallurgy and its processes	Define: Metallurgy, Ores, Minerals, Reactivity series, Malleability, Ductility, Students will be able to compare the metallurgical processes used in case of sulphide, carbonates ores and halides.compare roasting and calcination		TBQ and assignment	Concept map/flow charts and science cards	SDG 9 and 11	Problem solving and critical thinking	Peer learning
Bio.	Chap-8 How Do Organisms Reproduce Contd.Reproductive health need and methods of family planning	1. Understands importance of reproductive health, need and methods of family planning	To study a) Binary fission in amoeba, b) Budding in yeast and Hydra with the help of prepared slides	TBQs and assigment	Class test Self-Assessment and Reflection Peer Review	STDs causes and prevention/Safe sex vs HIV/AIDS SDG 2 & 3	CollaborationProblem solving, communication, critical thinking , Information literacy, flexibility and adaptability	Discusson method, peer to peer learning , Recall through mind map & student presentation
Sep								
1- 15 (11 days)								
Phy	Revision							
Chem.	Revision							
Bio.	Revision							
		REVISION and NOTE BOOK ASSESSMENT-I						
Sep 16-30								
16 - 30 (12 days	HALF YEARLY EXAMS (15 Sept- 26 Sept)							
			HALF YEARLY EXAM: SEPTEMBER (SCIENCE)					
			Chap-1 Chemical Reactions and Equations					
			Chap-2 Acid bases and salts					
			Chap- 5 Life processes					
			Chap-6 Control and coordination					
			Chap. 7 How do organisms reproduce (Half)					
			Chap-10 Light-Reflection and Refraction					
			Chap-11 Human eye and colourful world					
Oct								

1- 15 (8 days) Bio	**Chap- 9 Heredity & Evolution-Heredity, Mendel's contribution, trait expression, monohybrid and dihybrid cross and Laws for inheritance of**	**1. Is able to undersand Mendel's contribution 2. genetics of trait expression, monohybrid and dihybrid cross and Laws for inheritance of traits 3. Sex determination brief**	**Identification of the different parts of an embryo of a dicot seed (pea, gram or red kidney bean).**	**TBQ and assignment**	**Written assessments as SAQs, online quiz, oral assessments**	**SDG 2 and 3**	**Critical thinking, Problem sol**	**Discusson method, peer to peer learning , Recall through mind map & student presentation**
Phy	**Chap-12 : Electricity :** Arrangement of resistance-in series & in parallel		**1) To determine the equivalent resistance of two resistances when connected in parallel. 2) To determine the**	**Intext Questions**				
Chem.	**Ch 4: Carbon and its compound Bonding in carbon, saturated & unsaturated compounds, Homologous Series**	**Critically analyse and draw electron dot structures of some simple carbon compound Provide IUPAC names and write structural formulae of the carbon compound**		**Intext Questions**	**Peer Assessment, Written test**			**Lecture method**
Bio.	**Chap- 9 Heredity & Evolution Contd.- Laws of inheritance and Sex determination in humans.**	**1. Understands Mendel's laws of inheritance 2.Understands sex determination in humans.**	**Identification of the different parts of an embryo of a dicot seed (pea, gram or red kidney**	**TBQs and assigment**	**Written assessments as SAQs, online quiz, oral assessments**	**SDG 2 and 3**	**Critical thinking, Problem sol**	**Discusson method, peer to peer learning , Recall through mind map & student presentation**
				ONLINE EDUCOSOFT ASSESSMETS				
OCT								
16 - 31 (10 days)								

Phy	Chap-12 : Electricity : Heating effects of electric current ,electric power			TBQs and assigment				
Chem.	Nomenclature of carbon compounds	Students will be able to name the various carbon compounds		Intext Questons	Discussion of topic through Collaborative Learning;			
Bio.	C 15 OUR ENVIORNMENTAddition of waste, ecosystem,its components, food chain & Effect of activities on enviornment, ozone layer,	1. Understand eco-system components and functions 2. Understand environmental problems, Ozone depletion, waste production and their solutions. 3. Understand biodegradable and	To identify the different parts of an embryo of a dicot seeds.(Pea, gram & Red kidney bean)	TBQs and assigment	Class test group assignments and projects/ Information gathering	Ecosystem conservation SDG 13 & 15	Problem solving, communication Information literacy, flexibility and adaptability	Discusson method, peer to peer learning , Recall through mind map & student presentation
				ONLINE EDUCOSOFT ASSESSMETS				
Nov								
1- 15 (11 days)								
Phy.	Chap-13 Magnetic Effects of Electric Current:							
	Magnetic field & magnetic field lines,magnetic field due to current carrying conductor	1)analyse the concept of magnetic field and demonstrate its presence using a bar magnet. 2)learn the properties of magnetic field lines. 3)discuss the magnetic field around a straight current carrying conductor, a circular loop, a solenoid and an electromagnet. 4)state and apply right hand thumb rule to find the direction of magnetic field. 5)study the force on a current carrying conductor in a magnetic field. 6) state and apply fleming's left hand rule to determine the direction of force produced.	NOTE BOOK ASSESSMENT-II	Intext Questons	Presentations on science concepts/ experiments	Physics and Engineering: Understanding the working of electric motors and generators, relevant to both mechanical and electrical engineering. Physics and Technology: Learning how transformers and electromagnetic devices are used in power systems, computing, and technology applications. Physics and Environmental Science: Connection to renewable energy technologies like wind turbines, contributing to sustainable energy solutions. Physics and Mathematics: Applying mathematics (like vectors, algebra, and geometry) to solve electromagnetic problems and calculate forces. Physics and Computer Science: Using simulation software and programming to model and design electromagnetic systems. Physics and Chemistry:	Critical Thinking and Problem Solving – Analyzing and solving complex problems related to magnetism and electricity. Collaboration and Teamwork – Working together to complete group experiments, sharing ideas and responsibilities. Creativity and Innovation – Designing new experiments, motors, or systems using electromagnetic principles. Digital Literacy – Using digital tools, simulations, and virtual labs to experiment with and visualize concepts. Communication Skills – Explaining scientific concepts and presenting findings both orally and in written form. Adaptability and Flexibility – Adjusting experimental setups and troubleshooting to overcome challenges in experiments.	Inquiry-Based Learning: Students explore and investigate magnetic effects through questions and experiments. Demonstration and Experiment-Based Learning: Hands-on activities like building circuits, using compasses, and electromagnets to observe the magnetic effect. Flipped Classroom: Students learn theory outside class via videos and engage in practical work and discussions during class. Problem-Based Learning (PBL): Real-world challenges like designing electromagnets or electric motors encourage critical thinking and practical application. Conceptual Mapping: Visual representation of concepts to organize and connect knowledge. Collaborative Learning: Group activities to investigate various aspects of electromagnetism,
Chem.	Chemical properties of carbon compounds, soaps and detergents	Compare chemical properties of ethanol and ethanoic acid, write equations for chemical reactions	RACTICAL SKILLS ASSESSMENT-	TBQs and assigment	Observations and responses from activities	SDG 11,13	Collaboration and team work	Inquiry based learning

Bio.	REVISION							
				ONLINE EDUCOSOFT ASSESSMETS				
Nov.								
16 - 30 (12 days)								
Phy.	Chap-13 Magnetic Effects of Electric Current							
	magnetic field due to a current carrying coil or solenoid,Force on current carrying conductor, Fleming's L.H.R, Direct Current, Alternating Current,Frequency of AC,Advantage of AC over			TBQs and assigment	Concept Mapping,Use of online platforms (like Kahoot, Quizizz, or Google Forms) for quizzes with immediate feedback			
Chem.	REVISION			ONLINE EDUCOSOFT ASSESSMETS				
Bio.								
Dec.1-15								
No. of days-12								
Phy								
Chem.	REBOARD (8 Dec-22 Dec 202							
Bio.			Complete Syllabus					
Dec.								
16-31 (13 days)								
Phy	Revision for Board Examination							
Chem.								
Bio.								
Jan 1-15	WINTER BREAK							
16-31 (13 days)	Revision for Board Examination							
Feb.	Revision							
1- 15 (11 days)								
Feb.								
16 - 28(12 days)								
March								

1- 31 (25 DAYS)			BOARD EXAMINATION					
